



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/721,802	11/25/2003	Qi Cheng	SVL920030080US1	6257
47069	7590	06/30/2006	EXAMINER	
KONRAD RAYNES & VICTOR, LLP ATTN: IBM54 315 SOUTH BEVERLY DRIVE, SUITE 210 BEVERLY HILLS, CA 90212			ALI, MOHAMMAD	
			ART UNIT	PAPER NUMBER
			2166	

DATE MAILED: 06/30/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/721,802

Applicant(s)

CHENG ET AL.

Examiner

Mohammad Ali

Art Unit

2166

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☒ Claim(s) 3 and 13 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>6/05, 11/03</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This communication is in response to the application filed on 11/25/03.

The application has been examined and claims 1-21 are pending in this office action.

Specification

2. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

Examiner suggests Abstract should be more descriptive towards the invention.

Claim Rejections - 35 USC § 101

3. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1-21 are directed to non-statutory subject matter because it does not produce a tangible result. It's not until the selecting is brought out of the mind or processor that it becomes more than an abstraction, instead being real-world and enabling the functionality to be realized.

Also, claims 11-20 are directed to non-statutory subject matter. Computer program is used in a computerized process where the computer executes the instructions set forth in the computer program. Claimed invention taken as a whole is directed to a mere program listing, i.e., to only its description or expression, is it descriptive material per se and hence nonstatutory.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 3, 13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. "may be" is unclear towards the invention.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000.

Art Unit: 2166

Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

7. Claims 1-21 are rejected under 35 U.S.C. 102(e) as being anticipated by Larson et al. ('Larson' hereinafter), USP, 6,850,933.

With respect to claim 1,

Larson teaches a method for executing a query (see col. 6, line 48-49, Fig. 2), comprising:

matching a query to an outlier materialized query table (see col. 16, lines 55-61, Larson);

searching the query for a source predicate (see col. 16, lines 4-8, Larson);

searching the outlier materialized query table for a target column that corresponds to a source column in the source predicate (see col. 16, lines 62-67, Larson);

deriving a new range predicate based on the target column (see col. 16, lines 29-35, Larson); and

introducing the new range predicate into the query (see col. 8, lines 1-8, Larson).

As to claim 2,

Larson teaches merging the new range predicate into the query (see col. 9, lines 59-61, Larson).

As to claim 3,

Larson teaches generating a bounds view from source predicate information and range binding information collected for the target column, wherein the bounds view computes a lower bound and an upper bound for the new range predicate, and wherein the bounds view may be generated using at least one of a range multiplying technique or a range stretching technique (see col. 9, lines 16-26, Larson).

As to claim 4,

Larson teaches wherein matching the query to an outlier materialized query table further comprises: creating a first query graph model representation of the query (see col. 5, lines 55-65, Larson);

creating a second query graph model representation of the outlier materialized query table (see col. 11, lines 54-59, Larson); and

comparing the first query graph model and the second query graph model (see col. 7, lines 39-51 et seq., Larson).

As to claim 5,

Larson teaches wherein there is a join in the outlier materialized query table and wherein matching further comprises: determining that join predicates other than the outlier predicate in the outlier materialized query table have matching predicates in the query (see col. 7, lines 39-51, Larson).

As to claim 6,

Larson teaches wherein the new range predicate is derived by selecting the target column from base tables involved in the join (see col. 16, lines 62-67, Larson).

As to claim 7,

Larson teaches wherein the target column is from a table other than the one in which the source column resides (see col. 14, lines 13-21, Larson).

As to claim 8,

Larson teaches wherein the target column is from a same table as the one in which the source column resides (see col. 14, lines 13-21, Larson).

As to claim 9,

Larson teaches wherein the query contains a correlation predicate (see col. 16, lines 5-13, Larson).

As to claim 10,

Larson teaches translating the correlation predicate into a join predicate in a context of the outlier materialized query table (see col. 16, lines 55-67, Larson);

when the translated join predicate matches the join predicate in the outlier materialized query table, deriving a new predicate for the correlation predicate in a child query block using a source predicate on a quantifier of a parent query block (see col. 8, lines 40-67, Fig. 3, Larson); and

wherein searching the query for the source predicate further includes searching the parent query block for the source predicate (see col. 8, lines 40-67, Fig. 7, Larson).

Claims 11-21 have same subject matter as of claims 1-10 and essentially rejected for the same reasons as discussed above.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mohammad Ali whose telephone number is (571) 272-4105. The examiner can normally be reached on Monday-Thursday (7:30 am-6:00 pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hosain T. Alam can be reached on (571) 272-3978. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


Mohammad Ali
Primary Examiner
Art Unit 2166

MA
June 27, 2006